PRICE-LIST

— OF —

"LITTLE GIANT"

SCREW CUTTING TOOLS,

MANUFACTURED BY

WELLS BROS. & CO.,

— ALSO —

BLACKSMITHS' AND CARRIAGE MAKERS'

LABOR SAVING

TOOLS AND MACHINES,

GREENFIELD, MASS.,

U. S. A.

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PRICE LIST

—OF—

"LITTLE GIANT"

SCREW CUTTING TOOLS

—AND—

MACHINERY,

Manufactured by

WELLS BROS. & CO.,

F. E. WELLS. F. O. WELLS. F. E. SNOW.

JANUARY 1ST, 1889.

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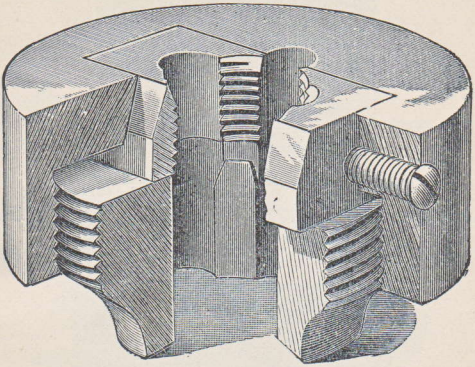
☞ Parties desiring information in regard to Screw-cutting Tools, etc., not contained in this Catalogue, are requested to write us, and the same shall have our prompt attention.

SUGGESTIONS IN ORDERING.

FIRST OF ALL, WRITE YOUR ORDER PLAIN. GIVE FULL INFORMATION AS TO SHIPPING. GIVE NAME OF NEAREST RAILROAD STATION OR EXPRESS CO. BE PARTICULAR AND STATE WHETHER YOU WISH YOUR TAPS, DIES, DRILLS AND REAMERS FOR ROUGH IRON OR FINISHED WORK, AS ROUGH IRON SIZES WILL, IN ALL CASES, BE SENT UNLESS OTHERWISE ORDERED. SAY WHETHER YOU WANT YOUR TAPS AND DIES FOR MACHINE OR PLATE, AND, IF FOR PLATE, GIVE NUMBER OF ASSORTMENT, WHICH YOU WILL FIND ON OUTSIDE OF BOX. STATE WHETHER YOU WANT YOUR DRILLING MACHINES AND TWIST DRILLS WITH 1-2, OR 41-64, SHANKS, AS WE SHALL ALWAYS SEND 1-2 UNLESS OTHERWISE ORDERED. IF YOU USE CARE IN MAKING ORDER PLAIN, MANY ANNOYANCES AND DELAYS WILL BE AVOIDED. SMALL ARTICLES CAN BE SHIPPED BY MAIL AT ONE CENT AN OUNCE WHEN MONEY IS SENT TO PAY POSTAGE, OR BY EXPRESS, C. O. D., WITH PRIVILEGE OF EXAMINATION. OUR PRICES ARE NET F. O. B. BOXING WHEN NECESSARY, AT COST.

NEW LITTLE GIANT SCREW PLATE.

ADJUSTABLE DIE.

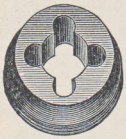


PATENTED FEBRUARY 3D, 1885.

SECTIONAL VIEW OF DIE AND COLLET.

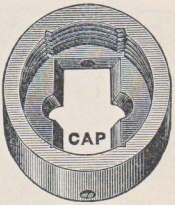
Explanation of THE LITTLE GIANT DIE.

The Collet, or holder, is made of two pieces called a Cap and a Guide. THE CAP has a bevel slot into which the bevel of Die is fitted. THE GUIDE is screwed into tne Cap, which throws the Die into the bevel of the Collet, and into line. To adjust, simply turn the screws at ends of Dies in or out as the adjustment desired requires.



GUIDE

DIE



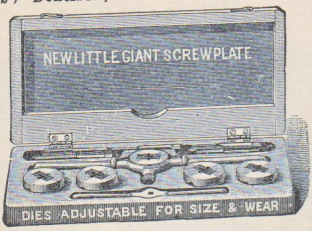
Our claim for this Adjustable Die is its solidity; the impossibility of striping of threads; its perfect adjustment; its simplicity, durability and strength; doing away with all taper pointed and cup-headed screws, common in many makes of Dies.

NEW LITTLE GIANT SCREW PLATES.

WIRE SIZES

For Jewelers', Dentists', Tool Makers' and Amateurs' Use.

No. A 1.



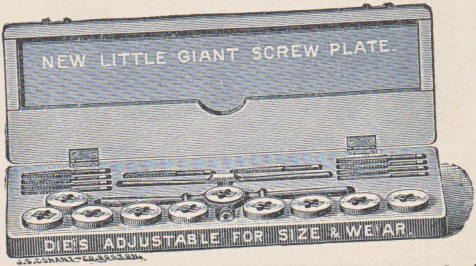
Assortment No. A 1. Has Stock, Tap Wrench, Taps, Dies and Collets.

Cutting, $\frac{1}{8}$ 40, $\frac{5}{32}$ 32, $\frac{3}{16}$ 24, $\frac{7}{32}$ 24, $\frac{1}{4}$ 20. Price $6.50

No. A 2.

Assortment No. A 2. Cuts $\frac{7}{64}$, $\frac{1}{8}$, $\frac{9}{64}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$. Price, $8.00.

No. A 3.



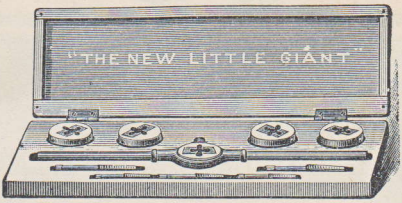
Assortment No. A 3. Cuts $\frac{7}{64}$, $\frac{1}{8}$, $\frac{9}{64}$, $\frac{5}{32}$, $\frac{11}{64}$, $\frac{3}{16}$, $\frac{13}{64}$, $\frac{7}{32}$, $\frac{15}{64}$, $\frac{1}{4}$. Price $10.50.

NEW LITTLE GIANT SCREW PLATES.

It is impossible for us, in this small space. to give a full description of the many assortments of these Plates, but we have endeavored to make all plain as possible in the following list.

Remember that these assortments are sold complete. If other sizes are wanted, add price of tap, die and collet as given in list price, page 12.

If less sizes are wanted, take prices from list, page 12.

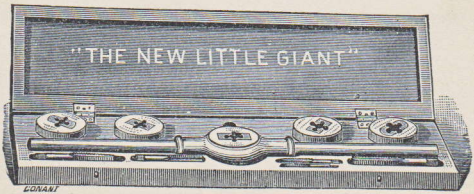


Cut showing No. 1 Plate complete in box.

Length of stock, 14½ inches.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$. Price $12.00

Adjustable Tap Wrench for this set (see page 21), Extra, $2.00.



Cut showing No. 2 Plate complete in box.

Length of stock, 23 inches.

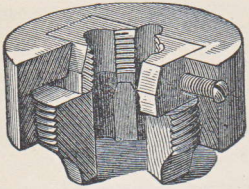
Cutting $\frac{1}{4}^{20}$, $\frac{3}{8}^{16}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$. Price.....$13.50

For prices of Adjustable Tap Wrenches, see p. 21.

For prices of Single Taps and Dies, see page 12.

NEW LITTLE GIANT SCREW PLATES.

PATENT ADJUSTABLE DIE.

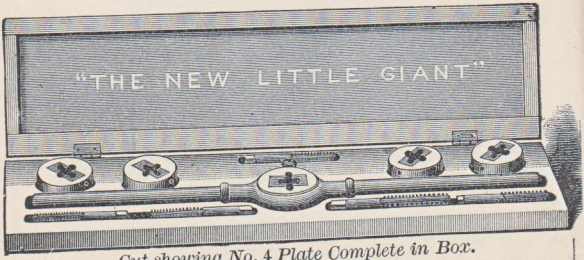


With this Die you have plenty of adjustment.

Cut showing No. 3 Plate Complete in Box.

Length of stock, 26 inches.

Cutting $\frac{3}{8}^{10}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}. Price.....$15.00



Cut showing No. 4 Plate Complete in Box.

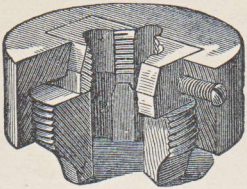
Length of stock, 26 inches.

Cutting $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}. Price.....$17.50

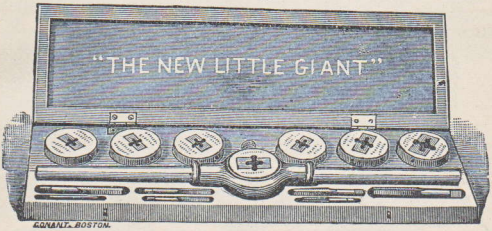
All plates supplied over size for rough iron, unless otherwise ordered.

NEW LITTLE GIANT SCREW PLATES.

PATENT ADJUSTABLE DIE.



It is held as firmly as though welded to the collet.

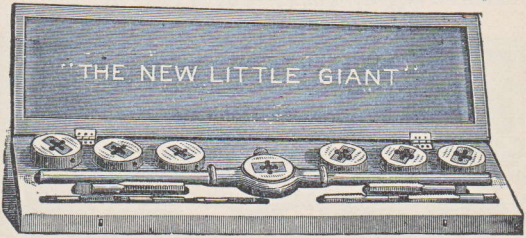


Cut showing No. 5 Plate Complete in Box.

Length of stock, 23 inches.

Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$. Price $16.00

Adjustable tap wrench for this set (see p. 21), extra $2.50



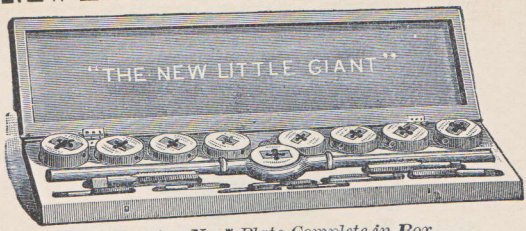
Cut showing No. 6 Plate Complete in Box.

Length of stock, 26 inches.

Cuts $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}. Price $22.00

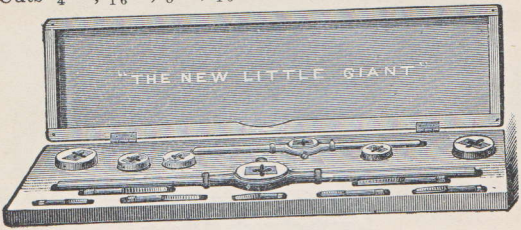
Plates furnished exact sizes, if so ordered, at same prices.

NEW LITTLE GIANT SCREW PLATES.



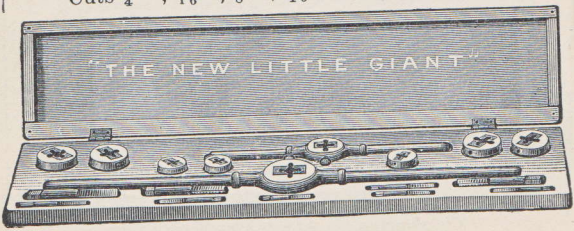
Cut showing No. 7 Plate Complete in Box.

Length of stock, 26 inches. Price.....$25.50
Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}



Cut showing No. 8 Plate Complete in Box.

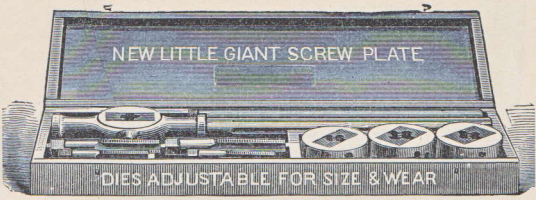
Has two stocks 14½ inches long for 4 smallest sizes, 26 inches for largest sizes. Price.....$18.00
Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$.



Cut showing No. 9 Plate Complete in Box.

Has stocks same as No. 8. Price.....$27.50
Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{10}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}.
Other threads furnished if desired.

NEW LITTLE GIANT SCREW PLATES.



No. 20 has stock 40 inches long. Price.....$35.00

Cuts $\frac{5}{8}$ ^{10}, $\frac{3}{4}$ ^{10}, $\frac{7}{8}$ ^{9}, 1 ^{8}, $1\frac{1}{8}$ ^{7}, $1\frac{1}{4}$ ^{7}.

No. 25 has stock 52 inches long. Price.....$45.00

Cuts $\frac{7}{8}$ ^{9}, 1 ^{8}, $1\frac{1}{8}$ ^{7}, $1\frac{1}{4}$ ^{7}, $1\frac{3}{8}$ ^{6}, $1\frac{1}{2}$ ^{6}.

No. 30 has stock 52 inches long. Price.....$37.50

Cuts $1\frac{1}{8}$ ^{7}, $1\frac{1}{4}$ ^{7}, $1\frac{3}{8}$ ^{6}, $1\frac{1}{2}$ ^{6}.

Left hand Taps and Dies are sold at same price as right hand.

To cut close up to a shoulder *use face side of die.*

Every part is made to gauge, and can be duplicated from stock.

NEW LITTLE GIANT SCREW PLATES.

—No. 40.—

Cuts $\frac{1}{4}$ 20, $\frac{5}{16}$ 18, $\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12, $\frac{5}{8}$ 10, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8, $1\frac{1}{8}$ 7, $1\frac{1}{4}$ 7.

No. 40 has two stocks 23 inches long for seven smallest sizes, 40 inches long for four largest sizes. Price, complete in box. . . . $40.00

With this assortment you have plenty of leverage for the largest sizes, and not too much weight on bolt on the smallest sizes.

If other sizes are desired add price of Tap, Die and Collet (see page 12).

Each assortment given on pages 4, 5, 6, 7, 8, 9, and 10, are put up in nice wood cases, making a convenient place for keeping of tools while not in use. These sets are sold complete.

RECAPITULATION.

For ready reference, we give below a complete list of the assortments and sizes of Plates illustrated. These Plates are sold complete. If other sizes are desired, add price of Tap, Die and Collet, Page 12.

For assortments of wire sizes see Page 4.

No. 1	has Stock	$14\frac{1}{2}$	inches long.	Cuts	$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$		**$12.00**
No. 2	" "	23	" "	"	$\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$		**13.50**
No. 3	" "	26	" "	"	$\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch		**15.00**
No. 4	" "	26	" "	"	$\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$ 1 inch		**17.50**
No. 5	" "	23	" "	"	$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$		**16.00**
No. 6	" "	26	" "	"	$\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch		**22.00**
No. 7	" "	26	" "	"	$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch		**25.50**
No. 8	" "	$14\frac{1}{2}$	" "	for four smallest sizes, and 26-inch Stock for largest sizes.			
	Cuts	$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$					**18.00**
No. 9	has Stock	$14\frac{1}{2}$	inches long for four smallest sizes, and 29-inch Stock for largest sizes.				
	Cuts	$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch					**27.50**
No. 20	has Stock	40	inches long.	Cuts	$\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$ inch		**35.00**
No. 25	" "	52	" "	"	$\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{1}{2}$ inch		**45.00**
No. 30	" "	52	" "	"	$1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{1}{2}$ inch		**37.50**
No. 40	" "	23	" "	for seven smallest sizes, 40-inch Stock for largest sizes.			
	Cuts	$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$					**40.00**

PRICES OF TAPS, DIES, ETC.,

FOR THE

NEW LITTLE GIANT SCREW PLATES.

Diameter, inch.	No. of Threads to inch.	Price of Tap.	Price of Die.	Tap, Die and Collet for Plates Nos. 1 to 9	Price of Tap, Die, and Collet for Plates Nos. 20, 25, 30.
3/16	24	$0.45	$1 00	$1.95	. . .
1/4	18-20	.45	1.00	1.95	....
5/16	16-18	.50	1.00	2.00	....
3/8	14 16	.55	1.25	2.30	....
7/16	14	.60	1.25	2.35	....
1/2	12-13	.70	1.50	2.70	....
9/16	11-12	.80	1.50	2.80	....
5/8	10-11	.90	1.75	3.15	4.15
11/16	11	1 05	1.75	3.30	....
3/4	10	1.20	2.00	3.70	4.70
13/16	10	1 40	2.00	3.90	....
7/8	9	1.60	2.75	4 85	5.85
15/16	9	1.80	2.75	5.05	....
1	8	2.00	2.75	5.25	6.25
1 1/8	7-8	2.25	4.00	....	7.75
1 1/4	7	2.60	4.00	....	8.10
1 3/8	6	3 00	5.00	....	9.50
1 1/2	6	3 50	5.00	....	10.00

Stock, 14½ inches..... $1.50
" 23 and 26 inches..... 2.00
" 40 inches..... 6.00
" 52 " 8.00
Collets for Plates Nos. 1 to 9, inclusive, .50 each.
" " " " 20, 25, 30, 40..... 1.50 "

Diameter of Collets, 2 inches, small sizes; 2¾ large sizes. In plates No. 1 to 9 inclusive.

Left hand taps and dies furnished at same price as right hand.

Prices for special taps and dies furnished on application.

Be particular to have your order plain.

NEW LITTLE GIANT SCREW PLATES.

The preceding pages give a full list of the assortments of these ***Celebrated Screw Plates.*** For durability, convenience, beauty of design and finish, they are unsurpassed by any make of plate

WHICH MAKE PERFECT THREADS AT ONE CUT.

The Dies are made on an entirely new principle (see cut on page 3), and are as rigid as solid dies, and yet can be adjusted to cut smaller or larger, by simply tightening or loosening two screws.

Dies adjustable for wear. Perfect Threads at one cut. Dies made from the best FLAT Steel, and best materials are used for every part.

Threads are cut and not bruised, and therefore are not raised above the size of the iron. Any part can be duplicated.

Nuts and Bolts need not be matched. Nuts can be made to fit tightly or loosely.

The Collets have guides for starting the threads true. When necessary to *cut close under the head use the face side of the die.* Every piece is made to a gauge, and can be shipped from stock.

Unless otherwise ordered, we fit our Taps and Dies with V THREADS FOR ROUGH IRON.

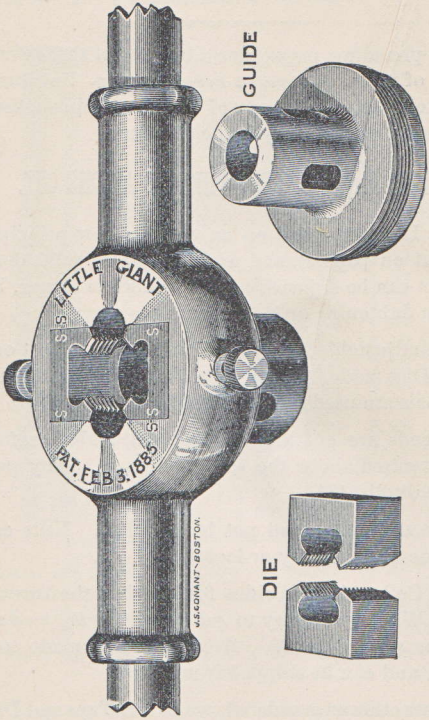
U. S. Standard or Whitworth form of Thread supplied when ordered, at same price.

For Prices of Dies see page 12.

NEW LITTLE GIANT SCREW PLATES.

FOR PIPE.

Material of the finest quality, and workmanship of the highest order.



To change from one size to another, simply screw out the guide, drop out the die, and replace with size die and guide required.

SECTIONAL VIEW:

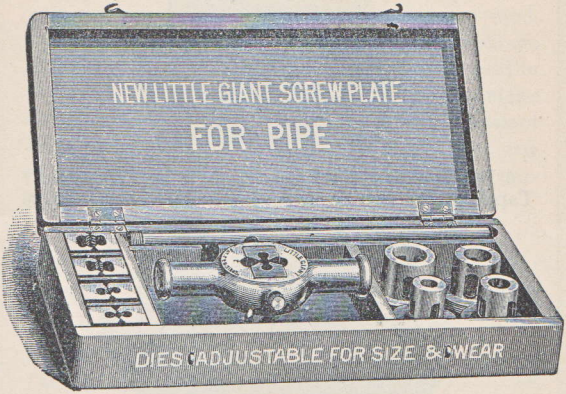
Showing parts of Plate A Stock, Die and Guide. The Stock has a bevel slot; the sides of Dies are also bevel; the bevel of Die is placed in the bevel of Stock, and Guide screwed in, which holds Die firmly in Stock. The Thumb Screws at ends of Dies are used to adjust Dies to size and wear, as well as to overcome irregularities in fittings.

NEW LITTLE GIANT SCREW PLATES.

FOR PIPE.

A SOLID DIE, YET ADJUSTABLE.

The introduction of the New Little Giant Patent Adjustable Die for BOLTS has been so satisfactory that we have adapted its use for PIPE.



The Guides are interchangeable throughout the set, for convenience in cutting Nipples.

Sure to cut the Thread straight.

The Dies can be re-sharpened.

Dies are adjustable to overcome variation of fittings or pipe.

Dies and Guides can be changed quickly.

It is light, yet strong and durable.

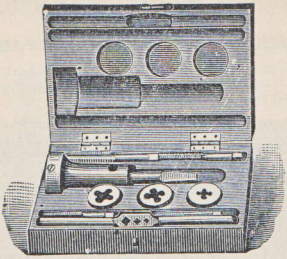
Dies are held by bevel. No screws to break or get out of order.

We sell this Plate as shown above, cutting ¼, ⅜, ½, ¾ and 1 inch, for	$12 00
Price of Stock, when sold alone.....	3 00
" Dies, " " " each size..	1 50
" Guides, " " " " ..	50
Our Plate cutting 1¼, 1½, 2 inch.....	20 00
Price of Stock, when sold alone	7 00
" Dies, " " " each size..	4 00
" Guides, " " " " ..	50

This Plate is packed same as shown above.

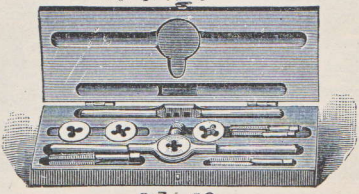
L. H. Dies furnished at same prices.

LITTLE GIANT SOLID DIE SCREW PLATE.



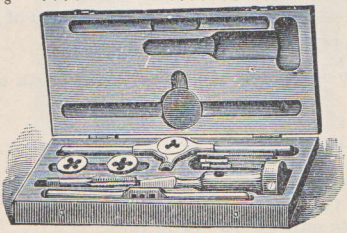
SIZE O.

1 Die Holder for Bit Brace use; 1 Tap Wrench; 1 Tap and Die each $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$. Price in case..$5.25



SIZE 00.

1 Die Stock; 1 Tap Wrench; 1 Tap and Die each $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$ ....Price in case..$5.25



SIZE 000.

1 Die Stock; 1 Die Holder for Bit Brace use; 1 Tap Wrench; 1 Tap and Die each $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$.
Price in case..... ....$6.00

Making Perfect Threads at One Cut.

Little Giant Solid Die Screw Plate.

MAKING PERFECT THREADS AT ONE CUT.

In response to a demand for Taps and Dies which will do good work and can be sold for a moderate price, we have decided to make sets as shown on opposite page. The Taps are the same as used in the new Little Giant Screw Plates, and the Dies make a perfect thread at one cut, but are *solid*, and cannot be adjusted for wear, but for the small sizes *only* this is not so necessary, and we think for many purposes these Dies will be found very useful tools.

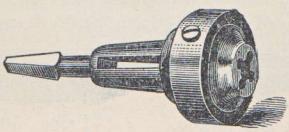
PRICES FOR TAPS, DIES, ETC.

Size	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$
Taps	$0 45	$0 45	$0 50	$0 55
Dies	.75	.75	.75	75

Die Holder for Bit Brace	$0 75
Die Stock	75
Tap Wrench	40

BIT BRACE COLLET HOLDER.

For Holding Dies and Collets used in Adjustable Die Plates.

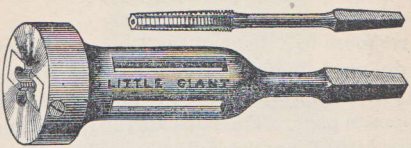


Collet Holder for Bit Brace Use.

Holds all sizes in No. 1, and 4 smallest sizes in Nos. 8 and 9 Plates. Price... .... $1 50

New Little Giant Taps, Dies and Collets.

FOR BIT BRACE USE.



With the Bit Brace Collet and Die Threads can be cut with great rapidity, and it can be used in places where a Screw Plate cannot; for instance on Clips, after they are shaped. Bolts can be dressed over if the threads have been bruised, without removing from place, etc.

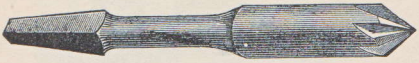
PRICES.

1 Collet, Tap and Die,	$\frac{3}{16}$ inch	$1.90
1 " " " "	$\frac{1}{4}$ "	1.90
1 " " " "	$\frac{5}{16}$ "	1.95
1 " " " "	$\frac{3}{8}$ "	2.00
1 " " " "	$\frac{7}{16}$ "	2.60

For Prices of Taps, Dies and Collets, see page 10.

COUNTERSINKS.

For use in Drilling Machines. Price, 50 cents each.
Size of shank, $\frac{1}{2}$ inch, or $\frac{41}{64}$ diameter.



For use in Bit Brace. Price, 50 cents each.

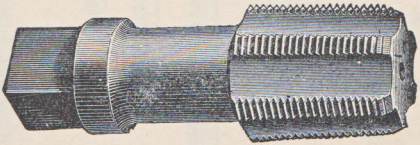
These Countersinks are $\frac{5}{8}$ inch diameter, are easily sharpened, and very durable, being made in the most careful manner from the best material.

BLACKSMITHS'

TAPER TAPS.

Diameter, inch.	Number of Threads to inch.	Price.
$\frac{1}{4}$	18, 20 and 24	$0.30
$\frac{5}{16}$	16, 18 and 20	.30
$\frac{3}{8}$	14, 16 and 18	.35
$\frac{7}{16}$	14, 16 and 18	.40
$\frac{1}{2}$	12, 14 and 16	.40
$\frac{9}{16}$	12 and 14	.50
$\frac{5}{8}$	10, 11 and 12	.50
$\frac{3}{4}$	10 and 12	.65
$\frac{7}{8}$	9 and 10	.90
1	8	1.25
$1\frac{1}{8}$	7 and 8	1.50
$1\frac{1}{4}$	7 and 8	1.75
$1\frac{1}{2}$	6	3.00

These Taps are turned and threaded their whole length, and are much superior to the ordinary blacksmiths' taps.



PIPE TAPS.

Size.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
Price.....	$1.12	$1.25	$1.50	$1.87	$2.50
Size.....	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$
Price.....	$3.12	$3.75	$4.62	$6.25	$10.50

SPECIAL PRICES

Given on all classes of Screw Cutting Tools and Machinery. We especially solicit correspondence in this department.

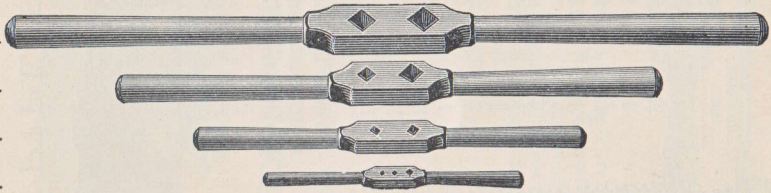
SOLID TAP WRENCHES.

No. 4.
Price $1.50.

No. 3.
Price $1.00.

No. 2.
Price $0.75.

No. 1.
Price $0.40.



Holds $\frac{7}{8}$-1 in.

Holds $\frac{5}{8}$-$\frac{3}{4}$.

Holds $\frac{7}{16}$-$\frac{1}{2}$.

Holds $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$.

These Wrenches are made of malleable iron, nicely polished, and case-hardened in the center, and the holes are fitted to receive the shanks of Taps manufactured by us.

Adjustable "Little Giant" Tap and Reamer Wrench.

An **ADJUSTABLE** Tap and Reamer Wrench, AT A REASONABLE PRICE, is what we here illustrate.

JAWS MADE OF THE BEST TOOL STEEL.

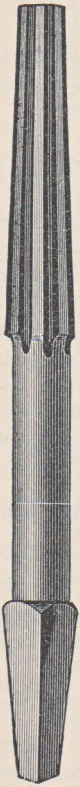
For general use in Machine Shops, there is no tool which will save your money as fast as a good Tap Wrench. So users cannot afford to be without them.

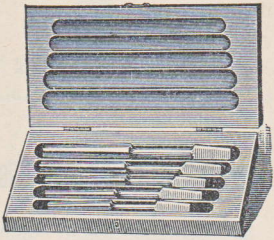
Because these Wrenches are cheap in price, do not think they are cheap in quality. We fully warrant them equal to ANY made. They are light, strong and durable. Workmanship of the highest order.

Size No. 0. Length, 7 inches, for Taps $\frac{1}{16}$ to $\frac{1}{4}$ inch.
Price..... $1.50
Size No. 5. Length, $10\frac{1}{2}$ inches, for Taps $\frac{3}{16}$ to $\frac{1}{2}$ inch.
Price.....$2.00
Size No. 6. Length, 15 inches, for Taps $\frac{1}{4}$ to $\frac{3}{4}$ inch.
Price.....$2.50
Size No. 7. Length, 20 inches, for Taps $\frac{3}{8}$ to 1 inch.
Price $3.50
Size No. 8. Length, 42 inches, for Taps $\frac{3}{4}$ to $1\frac{1}{2}$ inch.
Price.....$7.00

TAPER REAMERS FOR BIT BRACE.

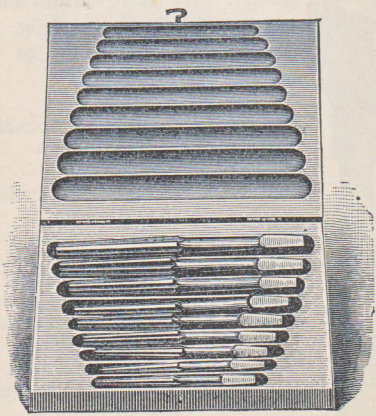
For reaming out and making true, smooth holes in wood or iron. Each Reamer tapers ⅛ of an inch, and follow, from the smallest to the largest. These will be found very useful tools.





PRICE.	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4
Per doz.,	$2.40	3.00	3.60	4.20	4.80	6.00	7.20	8.40	9.60
Each,	.20	.25	.30	.35	.40	.50	.60	.70	.80

Set of five, ¼ to ½ inclusive, in case as above..$1.70
Set of five, ¼ to ½ inclusive, without case..... 1.50
Set of nine, ¼ to ¾ inclusive, in case as below 4.40
Set of nine, ¼ to ¾ inclusive, without case.... 4.10



They are carefully made, and when properly used will do a surprising amount of work.

THE NEW LITTLE GIANT DRILL.

The illustrations given on the preceding pages give a fair idea of our New Little Giant Blacksmiths' Drilling Machines, as arranged for hand or power.

We desire to say this, that although we have put the price of these machines *low*, that nothing has been neglected to make them the *most perfect, compact and thoroughly well-made Drill* in the market.

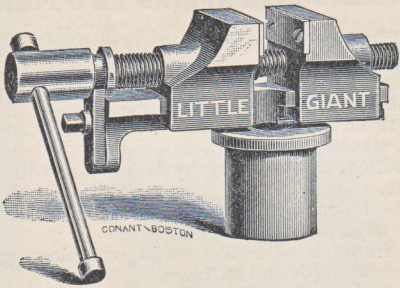
GENERAL DIMENSIONS AND POINTS.

WEIGHT OF THESE MACHINES 150 LBS.

Drills from $\frac{1}{8}$ to 1 inch hole.
Drills to center of 14 inch circle.
Has three changes of feed. Feed equally continuous on all changes.
Spindle self-lubricating by filling reservoir at top of same.
Table is removable for drilling Tire, and instantly adjustable to height.
The frame is of iron, cast in one piece, giving machine strength and stiffness.
Spindle is steel, with steel set screw.
Table is perfectly square with spindle.
The feed has a run of 4 inches.
The table has an adjustment of 16 inches.
On power machines pulleys will not interfere with use of hand crank.
Spindles are made to receive $\frac{1}{2}$ inch or $\frac{41}{64}$ shanked Drills, as ordered. Unless ordered otherwise, $\frac{1}{2}$ inch hole will be sent.
All parts are interchangeable. Bed of Machine is perfectly square with spindle.
[For Drills, Reamers, Countersinks, and other tools fitted for these machines, see other pages of Catalogue.]

LITTLE GIANT VISE.

For Holding all Shapes of Iron.



A new and useful Vise for holding all shapes and sizes of articles for drilling in our Drilling Machines. Has steel jaws, hole through shank to take any length. Arranged so as to be in center with spindle, or, if desired, can be thrown to one side. Jaws are operated by right and left-hand screw.

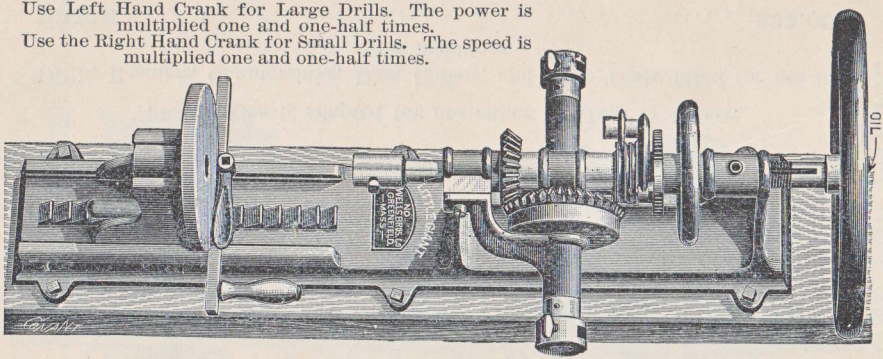
Price, complete, ... $8.00.

"LITTLE GIANT,"

ARRANGED FOR HAND.

No. 110

Use Left Hand Crank for Large Drills. The power is multiplied one and one-half times.
Use the Right Hand Crank for Small Drills. The speed is multiplied one and one-half times.



Change of Feed Instantaneous. All Parts Interchangeable.

Bed of this Machine is Perfectly Square with Spindle.

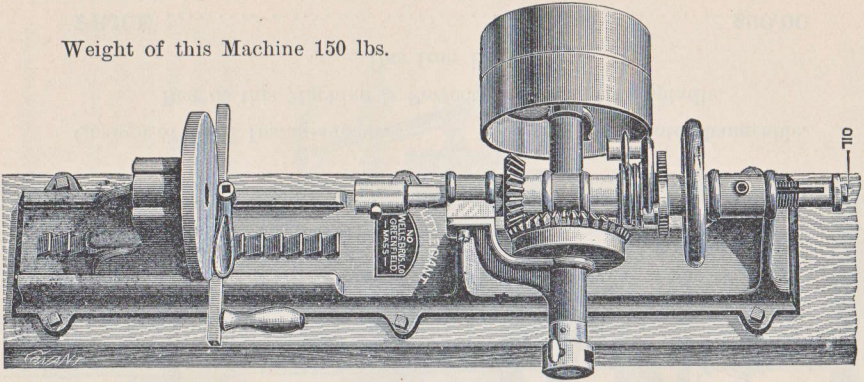
Has Iron Bed.

PRICE..... ... .$20.00

"LITTLE GIANT,"

ARRANGED FOR POWER.

Weight of this Machine 150 lbs.



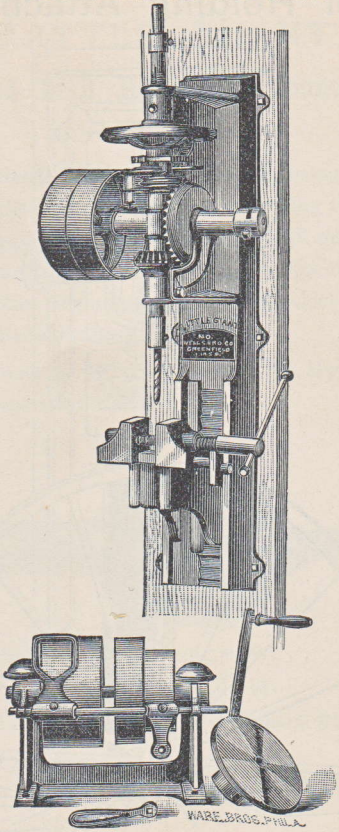
This Machine is adapted for use either by Hand or Power.

Drills, Reamers, Countersinks, Dies, Collets, and other Tools fitted for use in these machines.

PRICE **$23.00**

"LITTLE GIANT."

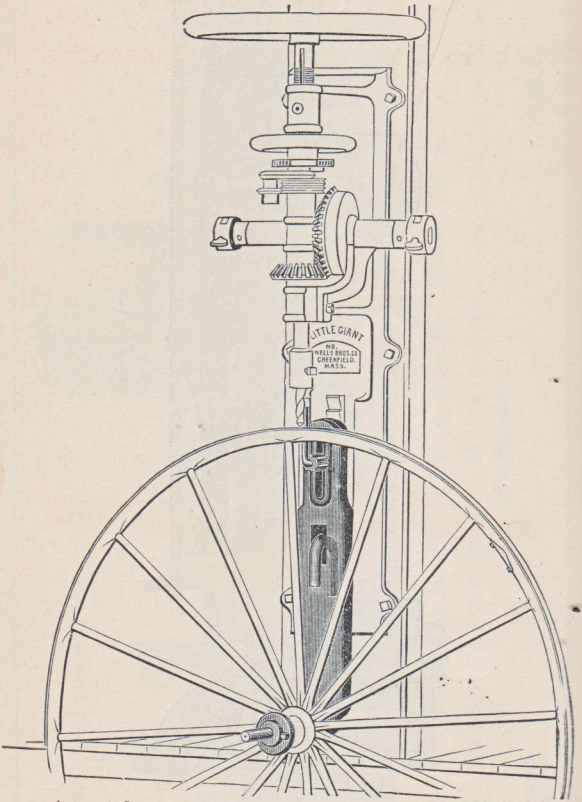
WITH COUNTERSHAFT AND VISE.



Price of Machine		$23.00
"	Countershaft	10.00
"	Vise	8.00
"	Machine, Countershaft and Vise	41.00

LITTLE GIANT

Wheel Holding Attachment.



As used upon our make of Blacksmith Drills.

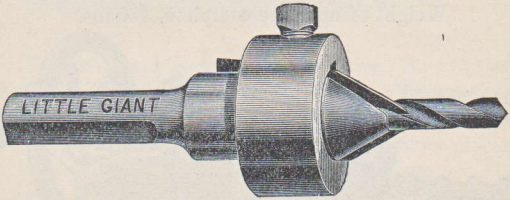
Price complete,	- - -	$4.00
" "	and Machine,	24.00

LITTLE GIANT

Combined Drill Holder and Countersink.

A combined drill and countersink, using *regular Twist Drills.* The countersink following drill, the job is complete at one operation. Drill may be set to drill hole to depth wanted. Countersink cutters can be taken out and ground. Hole clear through holder. Made of finest tool steel.

With $\frac{1}{2}$ inch or $\frac{41}{64}$ inch shanks. We always send $\frac{1}{2}$ inch unless otherwise ordered.



Made for holding the following sizes:

$\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{9}{32}$.

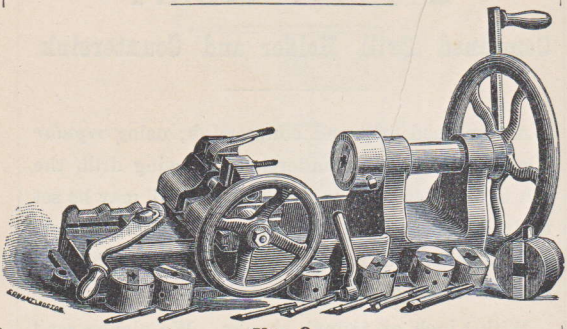
Price of countersink *without drill*, each $1.50.

Price of drills *without countersink:*

$\frac{1}{8}$	$\frac{5}{32}$	$\frac{3}{16}$	$\frac{7}{32}$	$\frac{1}{4}$	$\frac{9}{32}$
13c.	16c.	21c.	25c.	28c.	32.

HAND BOLT CUTTERS AND NUT TAPPERS.

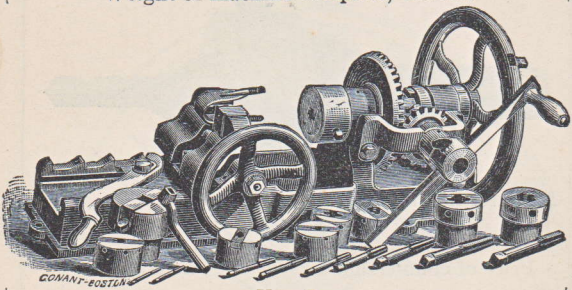
Nos. 6 and 7.



No. 6.

With Tap Chuck. Taps, Dies and Collets, cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$. Price complete.....$50.00

Weight of machine complete, 150 lbs.



No. 7.

With Tap Chuck, Taps Dies, and Collets, cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 in. Price complete..$70.00

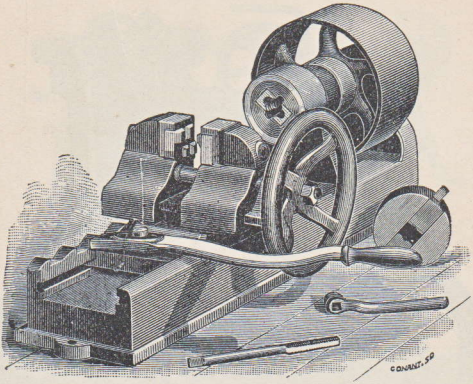
With Balance Wheel. Clutch on Spindle.

Weight of machine complete, 200 lbs.

We furnish either of above machines with solid Dies and Collets to cut same sizes at same prices.

POWER BOLT CUTTER (for bench.)

No. 0.



The above cut shows our new Power Bolt Cutter and Nut Tapper, arranged for bench. This makes a convenient machine where parties desire to cut one or more sizes of Bolts, etc., and in many places takes the place of much higher priced machines. It cuts to $\frac{3}{4}$ inch inclusive.

Pulley on spindle 4 inches wide.

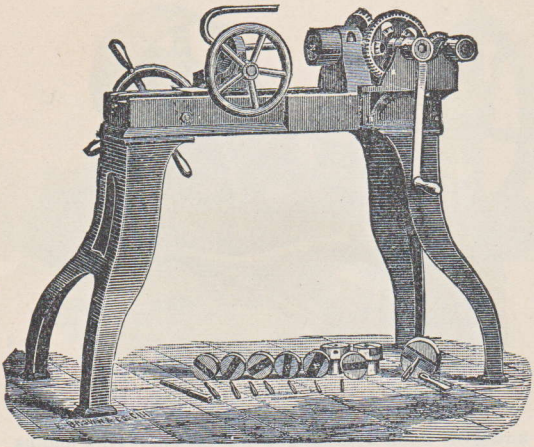
We price machine *without Taps, Die* and *Collets* as follows :

Machine with pulley on spindle, and Tap Chuck..... ....$40.00
Machine with tight and loose pulley, countershaft.. ..... 55.00
Machine with friction clutch countershaft 65.00

For prices of Taps, Dies and Collets, see page 37.

Bolt Cutter and Nut Tapper.

Nos. 8 and 8½. For Hand.



This machine has three changes of speed, multiplying the power two and seven times, and equalizing it once.

Assortment No. 8,

Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1. Price.....$90.00

Assortment No. 8½,

Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$. Price $108.00

Weight of machine, 350 lbs.

This machine has our improved tail block Jaws, for holding iron; also clutch on spindle, for throwing out gear.

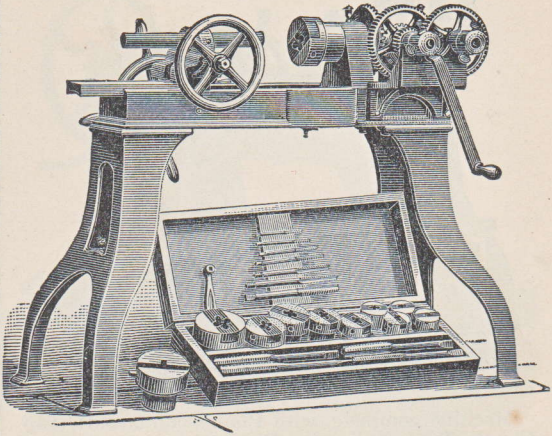
Balance wheel furnished on end of spindle for $5.00 extra.

For prices of extra parts, see list, page 37.

Bolt Cutter and Nut Tapper.

No. 9. For Hand.

AN EXCELLENT MACHINE FOR GENERAL SHOP USE.



No. 9. This machine has four changes of speed, multiplying the power 14, 7 and 3 times, and equalizes it once.

Crooked as well as straight, long as well as short bolts threaded equally as well. This machine has clutch on spindle for throwing out gear, also our improved Jaws for holding iron in the tail block, both of which are important features. Has hollow spindle, and is capable of a great variety of work.

Price, including Tap Chuck, Wrenches, Taps, Dies and Collets, cutting $\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12, $\frac{5}{8}$ 10, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8, $1\frac{1}{8}$ 8, $1\frac{1}{4}$ 7, $1\frac{3}{8}$ 6, $1\frac{1}{2}$ 6 ..... $140.00

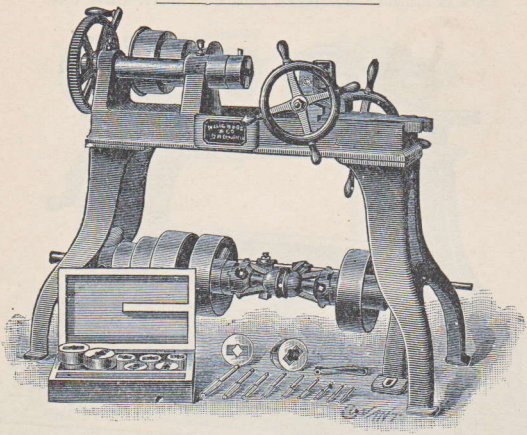
We furnish balance wheel on end of spindle for $5.00 extra.

Weight of machine, 400 lbs.

If more or less sizes are desired, add or substract price of tap, die and collet. See Price List, page 37.

Bolt Cutter and Nut Tapper.

Nos. 10 and 10½. For Hand or Power Use.



Machine complete, with Plain Countershaft, Tap Chuck, Taps, Adjustable Dies and Collets.

Assortment No. 10.

For $\frac{1}{4}$ 20, $\frac{5}{16}$ 18, $\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12, $\frac{5}{8}$ 10, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8.
Price..... .....$115.00

If with Friction Clutch, $10.00 extra.

Assortment No. 10½.

For $\frac{1}{4}$ 20, $\frac{5}{16}$ 18, $\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12, $\frac{5}{8}$ 10, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8, $1\frac{1}{8}$ 8, $1\frac{1}{4}$ 7 Price.....$133.90

If with Friction Clutch, $10.00 extra.

Weight of machine, 600 lbs.

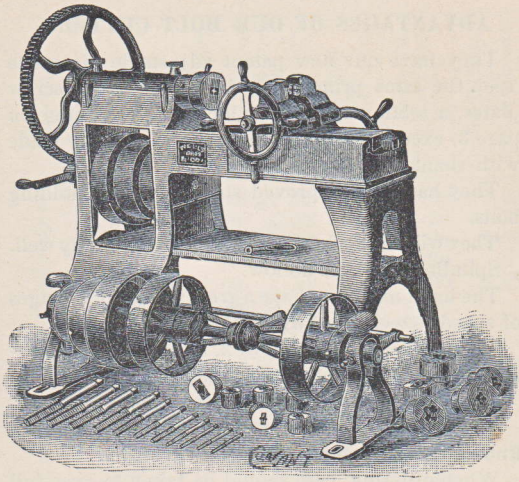
Speed of Countershaft, 250 revolutions per minute.

We furnish all our machines with V. Threads *and over size*, unless otherwise ordered. But if desired, Franklin Institute or Whitworth Threads are furnished at same prices.

For description of Dies, see page 3.
For prices of Taps and Dies, see page 37.

Bolt Cutter and Nut Tapper.

No. 12.



No. 12.

Machine complete, with PLAIN Countershaft, Tap Chuck, Taps, Dies and Collets.

$\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12, $\frac{5}{8}$ 10, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8, $1\frac{1}{8}$ 8, $1\frac{1}{4}$ 7, $1\frac{3}{8}$ 6, $1\frac{1}{2}$ 6. Price..... .....$165.00

If with Friction Clutch on Countershaft, $10.00 extra.

Weight of machine complete, 850 lbs.

Speed of Countershaft, 200 revolutions per minute. Pipe, Dies and Collets extra. See list, page 37.

Three-step Cone Pulley, with steps $3\frac{1}{2}$ x 8, 10, 12 inches. Large gear, 22 inches diameter. Small gear, 3 inches, giving great power.

For prices of extra parts see page 37.

Bolt Cutters and Nut Tappers.

FOR HAND OR POWER.

ADVANTAGES OF OUR BOLT CUTTERS.

They have our new patent adjustable die, made upon the same principle as those used in our screw plates, a sectional view of which may be found on page 3, except that on the larger sizes they are made with shanks, as shown below.

They have our improved steel Jaws, for holding bolts.

They will cut straight or crooked work equally well.

Spindles are made hollow.

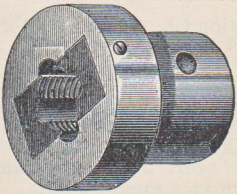
The hand machines have a great variety of changes of speed as well as a larger increase of power.

The power machines as well, are made more powerful, as well as adapted for a greater variety of work.

The changes of sizes of dies can be made instantly.

The reputation of these bolt cutters are so well known that comment by us is unnecessary.

When ordering, care should be taken to give full particulars as to form of thread, as well as number desired on each size. Unless otherwise ordered, "V" threads, rough iron sizes, and number of threads as given in assortment, will be sent.



Shanks of these Collets are made $2\frac{3}{4}$ inches diameter.

PRICES OF

TAPS, DIES, AND COLLETS,

FOR BOLT CUTTERS AND NUT TAPPERS.

Diameter, inches.	Number of Threads to inch.	Machine Taps, each.	Adjustable Dies, each without Collets.	Solid Bolt Dies without Collets.	Adjustable Die, Tap and Collet, per set.	Solid Pipe Dies, without Collets.
$\frac{1}{4}$	18 and 20	$0.60	$1 00	$2.00	$2.10	$2.00
$\frac{5}{16}$	16 and 18	.70	1.00		2.20	
$\frac{3}{8}$	14 and 16	.80	1.00	2.00	2.30	2.00
$\frac{7}{16}$	14	.90	1.50		2.90	
$\frac{1}{2}$	12 and 13	1 00	1.50	2.00	3.00	2.00
$\frac{9}{16}$	11 and 12	1.15	2 00		3.65	
$\frac{5}{8}$	10 and 11	1.30	2.00		3 80	
$\frac{11}{16}$	11	1.45	2.00		3 95	
$\frac{3}{4}$	10	1.60	2.00	2.00	4 10	2.00
$\frac{13}{16}$	10	1.80	3.00		6 30	
$\frac{7}{8}$	9	2 10	3.00		6 60	
$\frac{15}{16}$	9	2.40	3.00		6 90	
1	8	2.80	3 00	2.00	7.30	2.00
$1\frac{1}{8}$	7 and 8	3.20	4.50		9.20	
$1\frac{1}{4}$	7	3.70	4 50	3.50	9.70	3.50
$1\frac{3}{8}$	6	4 20	6 00		11.70	
$1\frac{1}{2}$	6	4.70	6.00	3.50	12 20	3.50

Taps and Dies fitted for rough iron, $\frac{1}{32}$ over size, unless otherwise ordered.

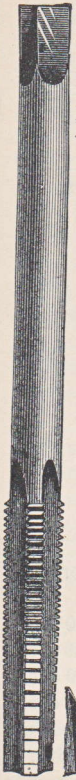
Collets, $\frac{1}{4}$ to $\frac{3}{4}$ (for Adjustable Dies) incl., $0 50 each.
Collets, $\frac{7}{8}$ to $1\frac{1}{2}$ (for Adjustable Dies) incl., 1 50 each.
Collets, $\frac{1}{4}$ to $1\frac{1}{2}$ (for Solid Dies) inclusive, 1 50 each.
Collets, for Pipe Dies .... 1 50 each.

Unless otherwise ordered, V THREADS will be furnished with all our Bolt-Cutting Machines. But, if desired, Franklin Institute or Whitworth Threads are furnished at same price.

HAND AND MACHINE NUT TAPS.

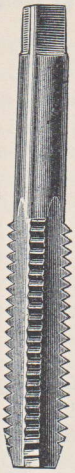
We furnish V, U. S. S., or Whitworth form of Threads in standard, $\frac{1}{64}$ or $\frac{1}{32}$ over size at same List Prices. All the sizes given on opposite page, to and including 2 inches, are usually kept in stock. Taps with Left Hand Threads, Square Threads, Carriage Bolt and Special Threads are furnished to order at special rates. Hobs or Master Taps, with short shanks, are furnished at 25 per cent. advance on prices of Machine Nut Taps.

SET OF HAND TAPS.

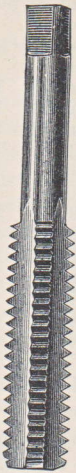


Machine Nut Tap.

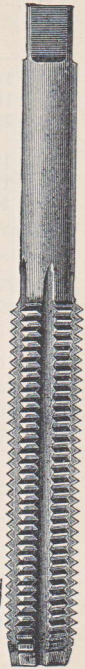
Taper Tap.



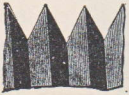
Plug Tap.



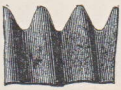
Bottoming Tap.



Hob Tap.



V Thread.



Whitworth Thread.

U.S. Standard Thread.

SIZES AND PRICES
OF
HAND AND MACHINE TAPS.

We send V form of Thread unless otherwise ordered.

Diameter.	No. of Threads to inch,	Hand Taps. Price Each.	Hand Taps. Price Per set.	Machine Nut Taps Price Each.
$\frac{1}{4}$	18, 20 and 22	$0.45	$1.35	$0 60
$\frac{5}{16}$	16 and 18	.50	1.50	.70
$\frac{3}{8}$	14, 16 and 18	.55	1.65	.80
$\frac{7}{16}$	12, 14 and 16	.60	1.80	.90
$\frac{1}{2}$	12, 13 and 14	.70	2.10	1.00
$\frac{9}{16}$	12 and 14	.80	2.40	1.15
$\frac{5}{8}$	10, 11 and 12	.90	2 70	1.30
$\frac{11}{16}$	11 and 12	1.05	3.15	1.45
$\frac{3}{4}$	10, 11 and 12	1.20	3.60	1.60
$\frac{13}{16}$	10	1.40	4.20	1.80
$\frac{7}{8}$	9 and 10	1.60	4 80	2.10
$\frac{15}{16}$	9	1.80	5 40	2 40
1	8	2.00	6.00	2.80
$1\frac{1}{8}$	7 and 8	2.25	6 75	3 20
$1\frac{1}{4}$	7	2.60	7 80	3.70
$1\frac{3}{8}$	6	3.00	9.00	4.20
$1\frac{1}{2}$	6	3.50	10.50	4.70
$1\frac{5}{8}$	5 and $5\frac{1}{2}$	4.20	12.60	5.30
$1\frac{3}{4}$	5	5.00	15.00	6.00
$1\frac{7}{8}$	$4\frac{1}{2}$ and 5	5.80	17.40	6.80
2	$4\frac{1}{2}$	6.70	20.10	7.70
$2\frac{1}{8}$	$4\frac{1}{2}$			9.00
$2\frac{1}{4}$	$4\frac{1}{2}$			10.20
$2\frac{3}{8}$	4			11.50
$2\frac{1}{2}$	4			12.50
$2\frac{3}{4}$	4			15.00
3	$3\frac{1}{2}$			18.00
$3\frac{1}{4}$	$3\frac{1}{2}$			21.50
$3\frac{1}{2}$	$3\frac{1}{4}$			25.50
$3\frac{3}{4}$	3			29.50
4	3			33.50

Care should be taken when ordering to state whether Taps are wanted *Exact or Rough Iron Sizes.*

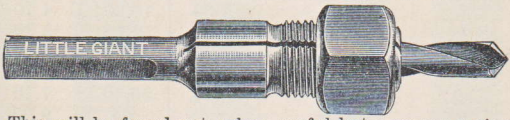
MACHINE SCREW TAPS.

Diameter Fractions of an inch.	Wire Gauge.	No. of Threads to inch.	Price each.	Price per dozen.
$\frac{7}{64}$	No. 4	32, 36, 40.	$0 35	$4 00
$\frac{9}{64}$	No. 6	30, 32, 36, 40.	35	4 00
$\frac{1}{8}$		30, 32, 36, 40.	35	4 00
$\frac{5}{32}$	No. 8	24, 30, 32, 36.	35	4 00
$\frac{3}{16}$	No. 10	20, 22, 24, 30, 32.	35	4 00
$\frac{7}{32}$	No. 12	20, 22, 24.	35	4 00
$\frac{1}{4}$	No. 14	16, 18, 20, 22, 24.	38	4 40
$\frac{17}{64}$	No. 16	16, 18, 20, 22.	38	4 40
$\frac{9}{32}$	No. 18	16, 18, 20.	38	4 40
$\frac{5}{16}$	No. 20	16, 18, 20.	45	5 30
	No. 22	16, 18.	45	5 30
$\frac{3}{8}$	No. 24	14, 16, 18.	45	5 30

Made of the best steel, accurately cut and finely finished.
Other threads furnished if desired.

LITTLE GIANT DRILL HOLDER.

FOR HOLDING STRAIGHT SHANK DRILLS.



This will be found not only a useful but a money-saving tool.

Useful, because it is always ready with drill set for use.

Useful, because drill can be set to just the right length for drilling.

Will save your money because you can buy straight shank drills for less than half the price of half-inch shank drills.

Will save your money because you can take so short a bite on drill that should it break you would yet have a part of drill saved.

These reasons, if there are no others, are enough to recommend it to all users of such tools.

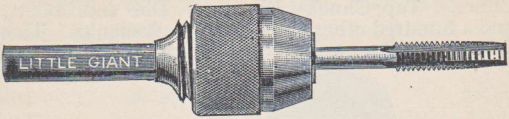
PRICES AND SIZES.

For holding drills $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, each, 75 cents.
When ordered in sets (6 sizes), price.....$4.20

Shanks are made to fit our Brace. See page 42.

LITTLE GIANT TAP CHUCK.

FOR MACHINE USE.



The above cut represents a cheap TAP CHUCK, for use in our BIT BRACE (see page 42), as well as all kinds of tapping machines.

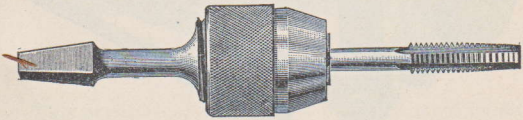
It holds TAPS to $\frac{7}{16}$ diameter.

Price, complete $2.50

$\frac{1}{2}$ inch, or $\frac{41}{64}$ inch shanks.

LITTLE GIANT TAP CHUCK.

FOR USE IN BIT BRACE.



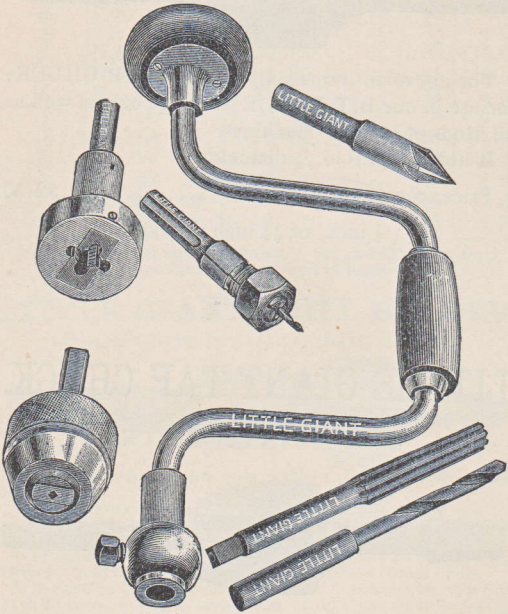
Holds Taps to $\frac{7}{16}$ diameter. Price. $2.50

These Chucks will be found very useful in all shops where more or less nut tapping is done, and work can be turned off with great rapidity.

LITTLE GIANT BIT BRACE.

FOR HOLDING TOOLS WITH ½-INCH SHANKS.

For Holding Drills, Reamers, Countersinks, Drill Chucks, Tap Chucks, Bit Brace, Dies and Collets, and a hundred other tools with ½-inch shanks. This will be found a most useful Brace.



½ inch.

In the above cut we have endeavored to show our New Brace, with several tools made for its use, of which a full description and prices will be found on other pages of this catalogue.

Price of Brace, each, $1.25, or $15.00 per dozen.

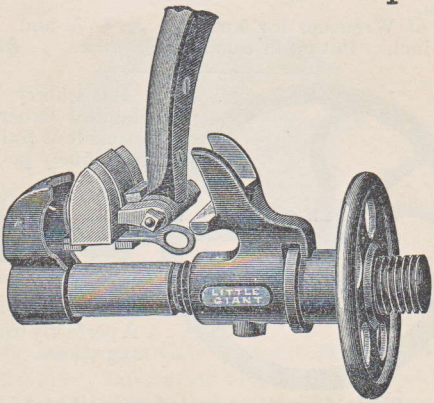
TWIST DRILLS.

FOR USE IN OUR DRILLING MACHINES.

Size.....	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$
Price.....	$0 45	$0 55	$0 65	$0 75	$0 85
Size.....	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$
Price	$0 95	$1 10	$1 30	$1 50	$2 00

Unless otherwise ordered, we send Drills $\frac{1}{32}$ inch over exact size, and at same price.

Little Giant Thill Coupler.

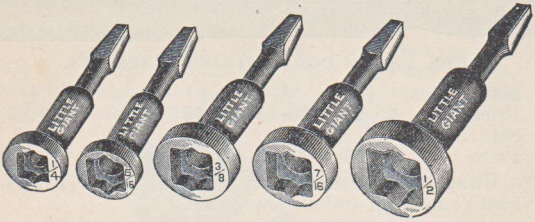


This useful tool will at once be appreciated by all parties who have rubbers to insert. We claim an advantage over all lever tools for this work from the fact with the screw the set will stop and hold at any point. No carriage-maker or liveryman can afford to be without this labor and time-saving tool.

Price... ..... $1.50 each; $18.00 per dozen.

LITTLE GIANT NUT WRENCHES.

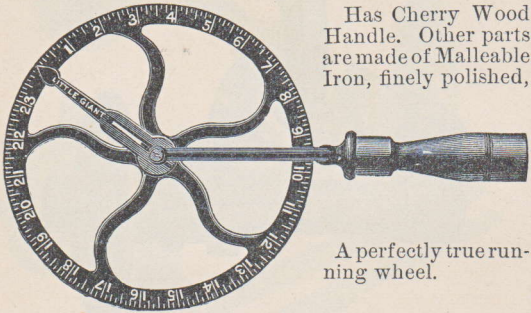
For Bit Brace Use.



FOR SQUARE OR HEXAGON NUTS.

For putting on and taking off nuts in carriage work. For Tapping Nuts, &c., these wrenches have become almost indispensable, and every carriage shop should have them.

Set of Wrenches for 5 nuts, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$ and $\frac{1}{2}$ inch Put up in wood cases, price.. .. **$1.25**



Has Cherry Wood Handle. Other parts are made of Malleable Iron, finely polished,

A perfectly true running wheel.

Little Giant Graduated Tire Wheel.

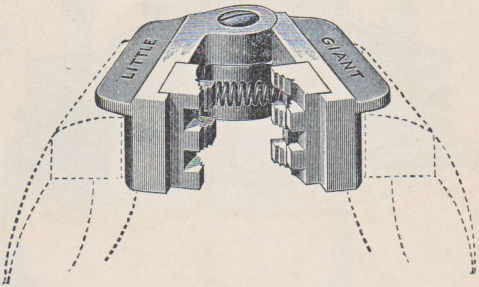
A durable and convenient tool for measuring lengths of tires accurately. The pointer is held in place by friction, so that it can be set instantly, and will not get loose. The whole is made of metal, is light, accurately made, and strong. The circumference of wheel is exactly Two Feet, graduated by one-eighth of an inch.

Price, Graduated **$1.50**
" Plain **1.25**

LITTLE GIANT

Vise Bolt Grip.

Did you ever try to hold a bolt in a common vise jaw while threading? If you have, you are well aware what an unsatisfactory job it is. Now here is something that will make it easy. The accompanying cut gives a clear idea as to its use. It holds without a possible chance of slipping.



They are always ready, and will fit any size or kind of vise Jaws made interchangeable, of best cast steel, hardened and tempered. A complete Tool in itself.

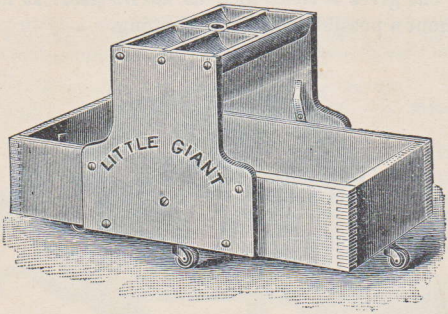
Price, complete,	- -	$1.75
" Steel Jaws a pair,	- -	.75

Will hold from $\frac{1}{4}$ in. to $1\frac{1}{2}$ in.

LITTLE GIANT

Farrier's Tool Box.

A cheap, strong, durable box for Horseshoers' Tools.



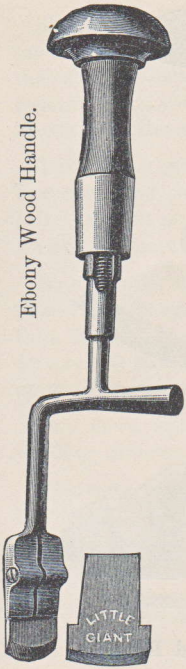
Made of thoroughly well-seasoned stock, lock cornered, mortised bottom and side pieces, finely finished and thoroughly made in every respect. This case, properly used, will last a Horseshoer very much longer than those commonly in use.

Price, - - $2.00 each.

Packed for the Trade in crates of four.

LITTLE GIANT HORSESHOERS' BUTTERIS.

This useful Tool will be highly appreciated by all horseshoers. Perfect in design, strong, durable and cheap

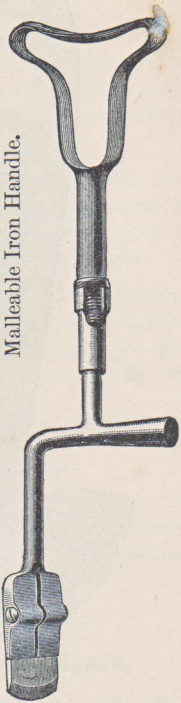


Ebony Wood Handle.

Handles adjustable to length. Knives replaceable.

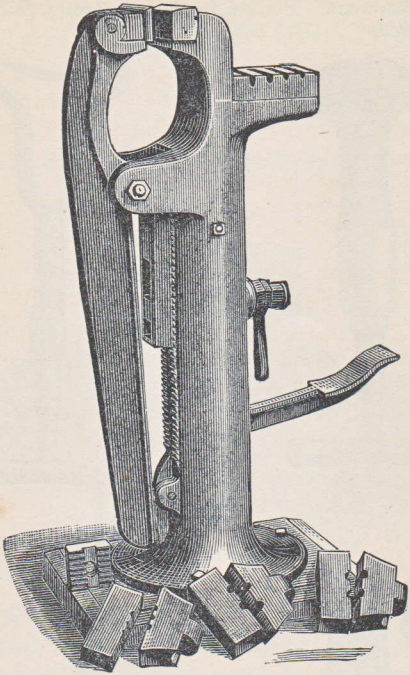
Malleable Iron Brace, highly polished.

Malleable Iron Handle.



Price of Butteris, with Ebony Handle.....$1.50
" " " Crutch " 1.50
Extra Knives..... 25
Making it the cheapest Butteris for Repairs in the market.

FOOT VISE AND BOLT HEADER.



Simple, Strong, Solid and Durable.

For forming, sharpening and welding calks on horse and ox shoes, for making bolt heads, and takes the place of an ordinary vise for bending and shaping hot iron, thus combining two machines in one

Weight, 165 pounds.

FOOT VISE AND BOLT HEADER.

Shoe Calks can be made sharp or square for winter or summer use, and the dies are so shaped that the calks are better formed than they can be in the ordinary way, and from two to three times as many as can be in the old way.

The die on which the calks are formed is of best tool steel, and is shaped so that it forms the calk the right shape; sharp or square calks can be formed by simply turning the steel die around.

By a peculiar arrangement of the dies they *adjust themselves to the shoe*, no matter whether it is thick or thin, tapering or straight, and do not hold the shoe by *corner of the dies*, as would be the case with any other arrangement.

The anvil attachment has grooves or dies for welding different sizes of sharp calks.

There are dies for making bolt heads on the following sizes of iron, from 1½ inch to 21 inches long: $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, and $\frac{3}{4}$ inch; the dies for forming shoe calks and other work

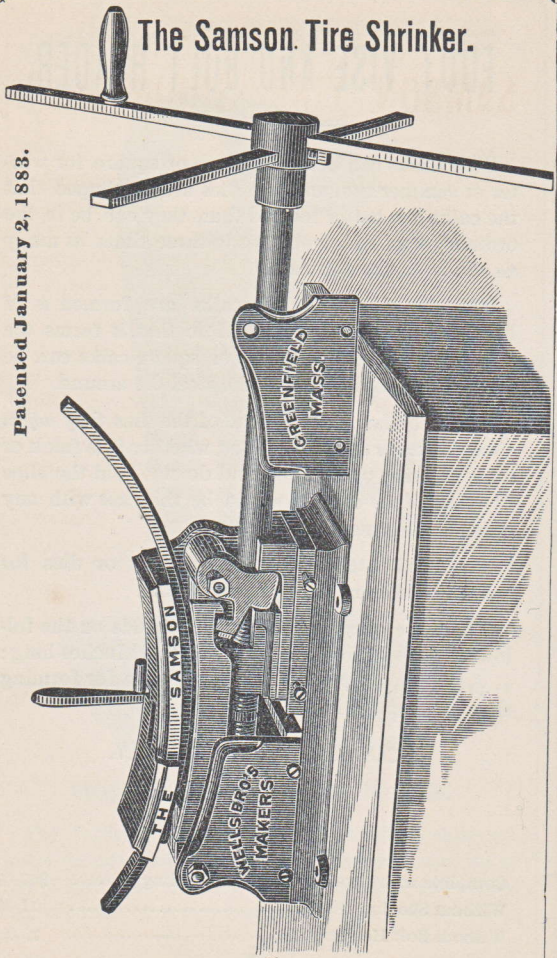
CAN BE CHANGED QUICKLY.

PRICES.

Complete with Shoeing and Bolt Heading Dies...	$20 00
Without Shoeing Dies,.....	17 00
Without Bolt Heading Dies	17 00

The Samson Tire Shrinker.

Patented January 2, 1883.



THE

SAMSON TIRE SHRINKER.

With this machine tires can be shortened without cutting and *without a hammer*. It is so easily worked that a boy can work it, and so quickly that a tire can be upset as soon as it could be cut; and it can be shortened the *exact distance required the first time.*

The power is supplied by a screw, with which we get at least four times the power that can be got in any other way. The shaft on which the screw is cut is long enough to let the handle revolve without hitting the tire, thus giving plenty of speed.

The tire is held so that it *cannot double up.* There are no cams to be hammered or put into place by hand before or after the tire is upset; it is sure to hold the tire until it is upset; and sure to loosen it afterwards. All that is necessary is to heat the tire, place it in the machine, and turn the handle until it is upset enough. All slipping and sticking are avoided.

This is the only machine in use in which this can be done.

It is made very strong and cannot break, and as there are only two small pieces of steel to wear, these can be easily sharpened.

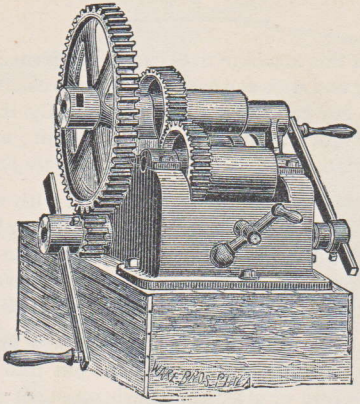
The principle of this machine is entirely new, and we warrant it to be and to do all we claim.

No. 2 will upset tires from $\frac{1}{8}$ to $\frac{3}{4}$ inch thick, 4 inches wide. Price, $25 00; weight about 220 lbs.

THE SAMSON TIRE BENDER

FOR

LIGHT OR HEAVY TIRES.



For light tire, use crank in large gear.
For heavy tire, use crank in small gear.

Price, without legs.....$25.00.

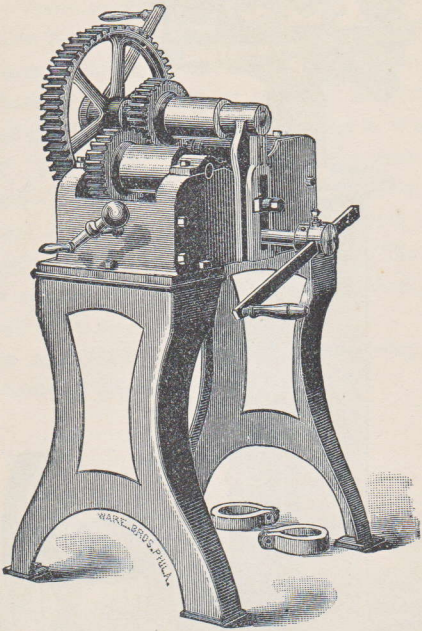
This machine bends tire from the lightest to, say, 3-4 x 5 inch; the upper roll is furnished with collar to guide narrow work.

The cut on this and the opposite page shows our improved "Samson" tire-bending machines. These are made from entire new patterns and new principle. The slipping of tire has heretofore been an objection as well as difficulty in bending tire; this difficulty we have overcome in our improved "Samson" by having all the rolls revolve, they being geared together in such a way that it is impossible for tire to slip or stick. Adjustment for size of circle is made by screw, raising and lowering right-hand roll. This machine will bend *accurately* and *easily* all sizes of tire.

THE SAMSON TIRE BENDER

FOR

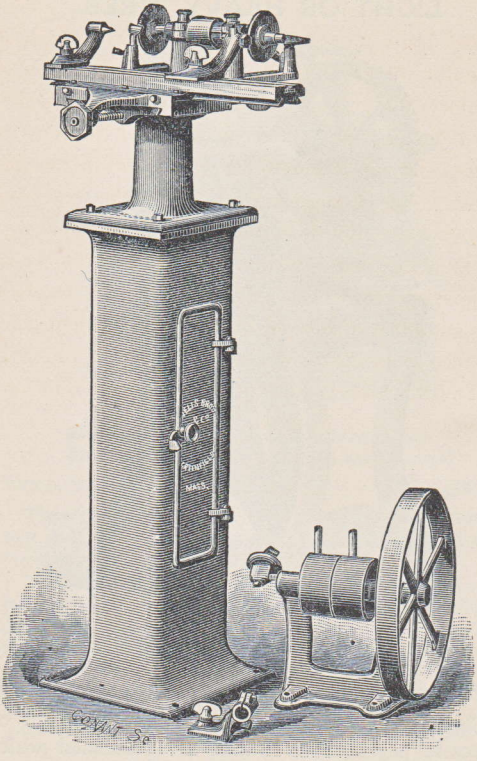
LIGHT OR HEAVY TIRES.



Price of machine, with legs.....$32.50

Capacity of this machine same as described on opposite page. Two cranks are furnished which can be used if desired. Upper roll is supported by face plate, which can be removed to take out tire without springing. Weight, about 300 lbs.

CUTTER GRINDING MACHINE.



For grinding Cutters, Taps, Taper Reamers, Lathe Tools, and various other uses.

CUTTER GRINDING MACHINE.

We desire to call special attention to this simple machine for grinding Milling Cutters, Taps, Taper Reamers, Lathe Tools, etc., etc. Cutters to 6 inches in diameter, both spiral or straight, Reamers 14 inches and less in length can be ground in this machine. The bearings are adjustable for wear, and the ways are gibbed, so that the machine can always be kept in good working order. The arbor is arranged for two wheels, one on each end. The base has a number of shelves, making a convenient place to keep tools, etc., while being ground.

The machine is of thorough workmanship, and substantial in all its parts.

GENERAL DIMENSIONS.

Tight and Loose Pulleys on Countershaft, 2 inch face.

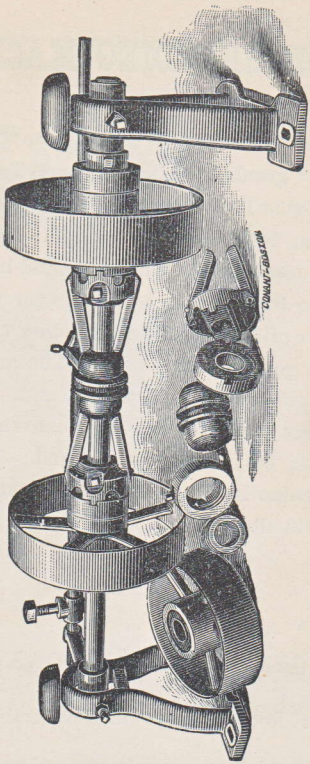
Speed of Countershaft, 500 revolutions per minute.

Weight of Machine, complete, 200 pounds.

Price of Machine, complete..... $62.00
Price of Machine, without standard or base, 50.00

Overhead work accompanies the machine.

FRICTION CLUTCH COUNTERSHAFT.



These Pulleys are noiseless, easy to work, of ample power, are easily adjusted, and will not slip nor stick. They are so simple that an explanation of the way they operate is unnecessary.

Prices for Countershaft, without Cone Pulley.

Diameter of Pulleys.	Width of Face.	Price.
10 inch.	3 inch.	$20.00
12 inch.	3 inch.	22.00

Friction Pulleys only, 10 inch, per pair..... $14.00
" " " 12 " " 16.00

Each pair has one thimble and four collars.

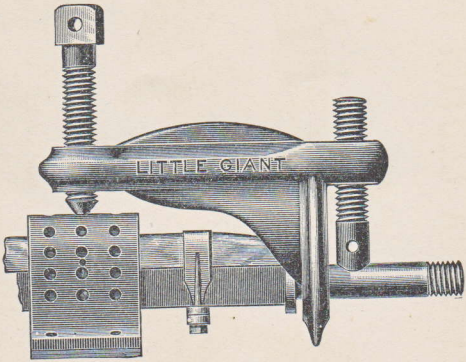
—THE—

LITTLE GIANT AXLE SETTER

—AND—

AXLE STRAIGHTENER.

A labor and time saving Machine that does its work completely, and in a workmanship manner. Axles bent in any shape can be set, without removing the axle, to their original shape; making a



perfect job. With the use of this machine it is not necessary to set axles on a new job until it is ready for the paint shop. All four axles can be straightened in less time than is usually required to remove one axle from a job preparatory to setting it.

SIMPLE, STRONG, AND PRACTICAL.

PRICE.

No. 2.—For Axles up to and including $1\frac{3}{4}$ inch. $6.00

MEMORANDUM.

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OIL
WELLS BROS.
GREENFIELD
MASS